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TOBACCO INDUSTRY RESEARCH COMMITTEE
150 EAST FORTY SECOND STREET NEW YORK 17, N. Y.

Application For Research Grant

#162

Date: May 20, 1957

1. Name of Investigator: **Jack Neal**
2. Title: **Associate Professor and Director of Industrial Hygiene Research Laboratory**
3. Institution
& Address: **Department of Preventive Medicine & Public Health
University of Texas - Medical Branch
Galveston, Texas**
4. Project or Subject:

Analysis of tars collected from cigarettes, manufactured from a single variety of tobacco, using smoking methods comparable to the average smoker.

5. Detailed Plan of Procedure (Use reverse side if additional space is needed):

1. Obtain cigarettes manufactured from the four most widely used varieties of tobacco.
2. Use Phipps - Bird smoking machine, puffing 35cc of air at 58 second interval, for a 2 second duration.
3. Redistilled methanol to be used as the collection medium.
4. Use powder chromatography to separate the hydrocarbons in the collected tar.
5. Weigh all compounds separated to 0.01 grams sensitivity.
6. Compare each fraction, separated from the different varieties, using the double beam infrared spectrophotometer with silver chloride plates and potassium bromide pellets.

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6. Budget Plan:

Salaries	\$ 6,180.00*
Expendable Supplies	1,000.00
Permanent Equipment	1,000.00
Overhead (15%)	1,227.00
Other	
Total	9,407.00

*Includes Social Security and Workmen's Compensation Insurance.

7. Anticipated Duration of Work:

One Year

8. Facilities and Staff Available:

See attached sheet

9. Additional Requirements:

1. Personnel

A. One laboratory assistant

B. One laboratory helper

2. Equipment and supplies

A. Chromotography supplies, powder, glassware, chemicals, etc.

B. Cigarettes manufactured similar to those commercially available, but composed of a single variety of tobacco.

10. Additional Information (Including relation of work to other projects and other sources of supply):

A. Relationship to other work:

1. The applicant has been engaged in a similar project since 1953 in which separation and identification work has been done on the commercially available cigarettes smoked under standard conditions. Also animal work has been done on the separated compounds of the tars recovered from the smoking apparatus. As a result of these four years of work a procedure has been worked out for the separation and identification of some of the principal chemical compounds found in tars collected under standard smoking conditions and the applicant wishes to apply this procedure to cigarettes composed of individual varieties of tobacco. It is the opinion of the applicant that if this procedure is applied to individual varieties of tobaccos the cigarettes must be made under the same conditions that the commercially available ones are made to obtain uniform results. Therefore, it is necessary to apply for a grant of money to defray the expense of securing these cigarettes.

Signature Jack Neal
Director of Project

E. D. Walker
Business Officer of the Institution

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8. Facilities and Staff Available:

A. Facilities

1. Space

Two large fully equipped chemical laboratories about 1200 ft. of floor space. These laboratories are especially designed for industrial toxicology and research.

2. Equipment

1. Double beam Baird infrared spectrophotometer.
2. Single beam Beckman infrared spectrophotometer.
3. D. U. Beckman spectrophotometer.
4. Hilger medium quartz spectrograph and plate reader.
5. Extra large Spencer polarizing microscope with complete accessories.
6. Phipps - Bird smoking apparatus.
7. 250 cigarette model universal smoking apparatus.
8. Complete powder chromatographic equipment.

B. Staff

1. Professor Jack Neal, director of Industrial Medicine Laboratory.
2. Available consultants in the fields of biochemistry, pharmacology and industrial medicine.
3. Laboratory assistants.

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